

NSLS OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: A. Ackerman, J. Aloj, B. Chmiel, N. Gmur, R. Heese, I. Pinayev, T. Shaftan, M. Santana, S. Stein	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Operate an Accelerator Job Number or Job Identifier: LS-JRA-0030	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Description: Operating conditions are established and maintained to provide satisfactory performance of the accelerator's intended function. Studies are periodically performed to determine operating characteristics under different operating conditions or with different equipment. As a part of operating the accelerator, visits are made to accelerator and experimental floor.	Severity (injury/ rad event) (C)	First Aid Only/ Rad stop work, RAR*	Medical Treatment/ ORPS threshold exceeded*	Lost Time/ NTS report filed with DOE*	Partial Disability/ DOE enforcement action levied against BNL*	Death or Permanent Disability/ DOE mandated rad ops stand down*
Training and Procedure List (Optional):	Likelihood (D)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple
Approved by: W.R. Casey Date: 10/18/05 Rev. # 2 Revision Log	Stressors (if applicable, please list all): Shift work, Time pressures when the machine is down		Reason for Revision (if applicable):		Comments:	

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	Hazard	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Initial Controls	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Operation of machine in	Unusual radiation levels caused by	Y	5	5	3	3	225	SAD, ASE, operator training, procedures,	5	5	1	2	50							

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normal mode	misteering or mistuning of beam							radiation monitoring, equipment design, configuration control												
Operation of machine in normal mode	Fire and or smoke caused by equipment malfunction or mis-use	N	5	5	5	2	250	SAD, Operator training, procedures, fire detection systems	1	5	5	1	25							
	Ergonomics	N	1	5	3	3	45	Special seating design, Proper body position, frequent breaks.	1	5	3	2	30							
Operation of beam position flags (insertion into the electron beam)	Unusual radiation levels caused by scatter off of the flag.	N	1	4	3	3	36	Surveys, shielding, procedures	1	4	3	2	24							
Emergency response by Operator or OpCo	Exposure to chemicals resulting from spill or release	N	1	5	2	3	30	Operator training, procedures,	1	5	2	2	20							
	Exposure to smoke or fire resulting from equipment malfunction	N	1	5	5	3	75	Operator training, procedures,	1	5	5	2	50							
	Oxygen deficiency hazards (asphyxiation)	N	1	4	5	3	60	ODH alarms (local and remote), postings, ventilation, training	1	4	1	2	8							
Operation of disconnects and circuit breakers	Electrocution	N	1	3	5	5	75	Proper grounding, proper equipment design (NRTL approved)	1	3	5	1	15							

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	Electrical Shock	N	1	3	3	5	45	Proper grounding, proper equipment design (NRTL approved)	1	3	3	1	9							
	Arc Flash	N	1	3	5	5	75	Training, proper grounding, proper equipment design (NRTL approved), NFPA 70E compliant PPE, standards & procedures	1	3	4	1	12							
Surveillance of equipment	Exposure to magnetic fields	N	1	3	1	4	12	Training, postings	1	3	1	4	12							
Floor surveillance	Trips, Slips, falls	N	1	5	3	3	45	Inspections, training, awareness building	1	5	3	2	30							
Floor surveillance	Injury from unsafe condition (e.g. electrical shock)	N	1	5	3	2	30	Inspections, training, awareness building	1	5	3	2	30							
Opening and closing plug doors	See Manual material handling LS-JRA-0018							See Manual material handling LS-JRA-0018												
	Being crushed by an object	N	1	2	5	3	30	Training, procedures	1	2	5	2	20							
	Being struck by an object (air pressure)	N	1	2	4	3	24	Training, equipment inspection	1	2	4	2	16							
	Ergonomics	N	1	2	3	3	18	Proper equipment lifting & handling techniques	1	2	3	2	12							

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Further Description of Controls Added to Reduce Risk:																					
*Risk:	0 to 20 Negligible	21 to 40 Acceptable						41 to 60 Moderate					61 to 80 Substantial					81 or greater Intolerable			